WHAT IS CLAIMED IS:

1. An associating information management system for associating various types of information and for managing the information, said system comprising:

5   a relationship management table for storing parent-child relationship in identification information of each type of information; and

retrieval processing means for performing retrieval processing of various types of information from parent to 10   child and from child to parent by association of the relationship management table in the information and the scope as designated.

2. An associating information management system according to claim 1, wherein said various types of 15   information are managed by a member management table where member data comprising said identification information and detailed information are stored.

3. An associating information management system according to claim 2, wherein said detailed information 20   comprises a classification information for classifying the members.

4. An associating information management system according to claim 3, wherein said classification information comprises type, rank, classification, and job 25   type.

5. An associating information management system according to claim 2, wherein said detailed information comprises various types of information including FAT

information, address recorded in FAT, file type, directory pass, file name, scope of selection, object, attribute and information having attribute.

6. An associating information management system according to claim 1, wherein said identification information comprises ID, FAT information, address recorded in FAT, file type, directory pass, file name, scope of selection, object, attribute, or information having attribute.

7. An associating information management system according to claim 1, wherein said relationship management table comprises information of mutual associating direction and degree of relationship.

8. An associating information management system for managing by associating various types of information, said system comprising:

a relationship management table for storing parent-child relationship in identification information of each information;

a member management table for storing said identification information and said various type of information;

input processing means for performing input, setting and indication of the data;

associating information management means for retrieving various types of information from parent to child and from child to parent by association of the relationship management table in the information and the

scope as designated by said input processing means and for processing various types of information stored in the member management table; and

output processing means for performing output

5   processing of the data processed by said associating information management means.

9. An associating information management system according to claim 8, wherein said input processing means associates one or a plurality of data stored in said member

10   management table with one or a plurality of different types of data under a given condition, and stores the result of the association in said relationship management table.

10. A program for associating information management for associating and managing various types of information

15   by using a relationship management table for storing the result of said association of parent-child relationship in identification information of various types of information, whereby there are provided a function to carry out retrieval of various types of information from parent to

20   child by the association of the relationship management table and a function to perform retrieval of various types of information from child to parent.

11. A program for associating information management for associating and managing various types of information

25   by using a relationship management table for storing the result of said association of parent-child relationship in identification information of various types of information, whereby the program carries out a function to select one or

a plurality of parents or one or a plurality of children
under a selection condition as designated by said various
types of information, a function to associate said selected
one or a plurality of parents and said one or a plurality
5   of children by said identification information and to store
in the relationship management table, a function to
retrieve various types of information from parent to child
by association of the relationship management table, and a
function to retrieve various types of information from
10   child to parent.

12. A recording medium for associating information
management to associate and manage various types of
information, said recording medium being able to read the
data by computer and used to record at least:

15   a relationship management table for storing
association of parent-child relationship in identification
information of various types of information; and

a retrieval processing program for performing
retrieval processing of various types of information from
20   parent to child and from child to parent by association of
the relationship management table in the designated
information and scope.

13. A recording medium for associating information
management to manage various types of information by
25   associating, said recording medium being able to read by
computer and at least comprising:

a relationship management table for storing
association of parent-child relationship by identification

93

information of various types of information;

a member management table for storing said identification information and said various types of information;

5   an input processing program for inputting, setting, and indicating the data;

an associating information management program for retrieving various types of information from parent to child and from child to parent by association of said

10   relationship management table in said designated information and scope and for processing various types of information stored in said member management table; and

an output processing program for performing output processing of the data processed by said associating

15   information management program.

14. An associating information management system provided with database, said database comprising;

a member management table for storing member information of individuals and organizations including name

20   or organization name, address, telephone number, etc.; and

a relationship management table for defining relationship between a member registered in the member management table and another member related to said member by parent-child relationship and for entering

25   classification code to indicate type of relationship and priority rank of the relationship.

15. An associating information management system according to claim 14, wherein there is provided a

classification table for defining which relationship the classification code indicates and which priority rank the classification code indicates in addition to the relationship management table.

5   16. An associating information management system according to claim 14 or claim 15, wherein there is provided an area code for statistical data preparation and for classification and assignment of the registered member in the registration items in the member management table.

10   17. An associating information management system, comprising:

a member management table for storing member information of individuals and organizations including name or organization name, address, telephone number, etc.;

15   said system records relationship record defining relationship between a member registered in the member management table and another member relating to said member by parent-child relationship, said system being provided with a database, which comprises a relationship management

20   table for recording classification code indicating type of the relationship and priority rank of the relationship, and when the member is designated as a reference person, a member in parent-child relationship with said member is extracted and displays parent member, child member and

25   grandchild member together with the reference person as a list, said system further comprising means for executing the following steps of:

(1) making a code of a member selected in a member

95

list extracted by designating a specific condition as a reference person code ("reference person CIF");

(2) acquiring information of the reference person from the member management table based on the reference person CIF and of storing the information in a reference person display area;

(3) extracting codes of all members in parent relationship of the reference person from the relationship management table ("parent CIF") and classification thereof based on the reference person CIF, acquiring each information from the member management table and priority rank of classification from the classification table, and storing the information in a parent member list display area from a member with higher priority rank;

(4) extracting codes of all members in child relationship of the reference person from the relationship management table ("child CIF") and classification thereof based on the reference person CIF, acquiring each information from the member management table and priority rank of classification from the classification table, and storing the information in a child member list display area from a member with higher priority rank;

(5) extracting codes of all members in child relationship of a child member at the uppermost part of the child member list display area ("grandchild CIF") from the relationship management table based on a child CIF at the uppermost part of the child member list display area and classification thereof, acquiring each information from the

member management table and priority rank of classification
from the classification table, and storing the information
in a grandchild member list display area from a member with
higher priority rank;

5   (6) displaying the display area;

         (7) judging whether or not the user has selected a
member other than the uppermost member in the child member
list display area (If selected, advance to Step (8). If
not selected, advance to Step (9));

10   (8) extracting codes of all members in child
relationship of a child member selected in the child member
list display area and classification thereof from the
relationship management table based on the selected child
CIF, acquiring each information from the member management
15   table, and priority rank of classification from the
classification table, and storing and displaying again the
information in a grandchild member list display area from a
member with higher priority rank;

         (9) judging whether a reference person change button
20   is pressed or not (If pressed, advance to Step (10). If
not pressed, wait for the next instruction.); and

         (10) making a code of a member as a reference person
CIF who was selected by the user from each of the parent
member list display area, the child member list display
25   area, and the grandchild member list display area (Return
to Step (2).).

         18. An associating information management system,
comprising:

97

a member management table for storing member information of individuals and organizations including name or organization name, address, telephone number, etc.;

said system records relationship record defining
5   relationship between a member registered in the member management table and another member relating to said member by parent-child relationship, said system being provided with a database, which comprises a relationship management table for recording classification code indicating type of
10   the relationship and priority rank of the relationship, and a member in parent-child relationship is extracted by a member code set in the reference person, and degrees of relatives are displayed in a tree view in the order of relatives of closer degree, said system further comprising
15   means for executing the steps of:

(1) acquiring information of the reference person member of the member management table based on the reference person CIF, and displaying the information in a tree view area;

20   (2) selection of the first degree relatives

(2-1) extracting a parent member from the relationship management table based on the reference person CIF, and additionally displaying the information under the reference person with one member in one step in the second column of
25   the tree view area in the order of priority rank;

(2-2) extracting a child member from the relationship management table based on the reference person CIF, and additionally displaying the information under the parent

98

member with one member in one step in the second column of
the tree view area in the order of priority rank, whereby
an abbreviation symbol is added after the name if a member
with the same CIF is already displayed in the tree view;

5   (3) selection of the second degree relatives;

(3-1) performing the following processing in the order
from higher position on members of the first degree
displayed in the second column:

(3-2) extracting a parent member from the relationship
10 management table based on the first degree relative CIF,
and inserting and displaying the information between the
corresponding first degree member and the next first degree
member with one member in one step in the third column of
the tree view area in the order of priority rank, whereby
15 "selection of the second degree relatives" is not carried
out if the member of two degrees before (the reference
person) in direct line is the same member;

(3-3) "selection of the second degree relatives" is
not carried out if an abbreviation symbol is attached to a
20 member in the corresponding step of the first degree;

(3-4) adding an abbreviation symbol after the name if
a member with the same CIF is already displayed in the tree
view;

(3-5) extracting a child member from the relationship
25 management table based on the first degree relative CIF,
and inserting and displaying the information between the
corresponding first degree member and the next first degree
member with one member in one step in the third column of

the tree view area in the order of priority rank, whereby "selection of the second degree relatives" is not carried out if the member of two degrees before (the reference person) in direct line is the same member;

5   (3-6) "selection of the second degree relatives" is not carried out if an abbreviation symbol is attached to a member of the corresponding step of the first degree;

    (3-7) adding an abbreviation symbol after the name if a member with the same CIF is already displayed in the tree

10 view area;

    (4) selection of n-th degree relatives (n = 3)

    (4-1) performing the following processing respectively in the order from higher position on n-1-th degree member displayed in n-th column;

15   (4-2) extracting a parent member from the relationship management table based on n-1-th degree relative CIF, and inserting and displaying the information between the member of the corresponding n-1-th degree and the next n-1-th degree member with one member in one step in n+1-th column

20 of the tree view area in the order of priority rank, whereby "selection of n-th degree relatives" is not carried out if a member of two degrees before (n-2-th degree relative) in direct line is the same member;

    (4-3) "selection of n-th degree relative" is not

25 carried out if an abbreviation symbol is attached to a member of the corresponding step of n-1-th degree;

    (4-4) adding an abbreviation symbol after the name if a member with the same CIF is already displayed in the tree

view area;

(4-5) extracting a child member from the relationship management table based on n-1-th degree relative CIF, and inserting and displaying the information between the corresponding n-1-th degree member and the next n-1-th degree member with one member in one step in n+1-th column of the tree view area in the order of priority rank, whereby "selection of n-th degree relative" is not carried out if a member of two degrees before (n-2-th degree relative) in direct line is the same member;

(4-6) (selection of n-th degree relative) is not carried out if an abbreviation symbol is attached to a member in the corresponding step of n-1-th degree;

(4-7) adding an abbreviation symbol after the name if a member with the same CIF is already displayed in the tree view area;

repeating Step (4) until "n" reaches a predetermined number by progressively increasing "n" by one in Step (4) after the procedure of (5) above, and completing the processing if "n" reaches the predetermined number.

19. An associating information management system, comprising:

a member management table for storing member information of individuals and organizations including name or organization name, address, telephone number, etc.;

said system records relationship record defining relationship between a member registered in the member management table and another member relating to said member

by parent-child relationship, said system being provided with a database, which comprises a relationship management table for recording classification code indicating type of the relationship and priority rank of the relationship, and said system extracts up to any degree of relative as desired and displays whether a relationship route is made up using member codes of two members as set to the reference person, said system further comprising means for executing the steps of:

(1) setting one of the two members for tracing the relationship as a regular member, and the other as a sub-member, storing a setting condition to trace whether the sub-member is connected with the regular member, and initializing array area in the memory for temporarily storing retrieval result;

(2) storing the setting condition as to up to which degree should be searched at the furthest or whether the shortest route should be searched or all routes should be searched as designated by the user when processing is performed;

(3) extracting the first degree member in parent-child relationship of the regular member;

(3-1) judging whether ia-th (i = 1 to n) member is a sub-member or not among the number of records "na" of the extracted first degree member;

(3-1-1) if it is a sub-member, executing the processing of Step (3-1) to the record of the next first degree member by storing the route from the regular member

102

in array area of the memory;

(4) if it is not a sub-member, extracting the second degree member in parent-child relationship of ia-th member of the first degree;

5   (4-1) judging whether ib-th (i = 1 to n) member is a sub-member or not among the number of records "nb" of the second degree extracted;

(4-1-1) if it is a sub-member, executing the processing of Step (4-1) to the record of the next second

10 degree by storing the route from the regular member in array area of the memory;

(4-2) if it is not a sub-member, judging whether the same member as ib-th member of the second degree is present at higher position in the route or not;

15 (4-2-1) if it is present at higher position, executing the processing of Step (4-1) to the record of the next second degree member by interrupting the processing;

(5) if it is not present at higher position, extracting the third degree member in parent-child

20 relationship of ib-th member of the second degree;

(5-1) judging whether ic-th (i = 1 to n) member is a sub-member or not among the number of records "nc" of the third degree extracted;

(5-1-1) if it is a sub-member, executing the

25 processing of Step (5-1) to the record of the next third degree member by storing the route from the regular member in array area of the memory;

(5-2) if it is not a sub-member, judging whether the

103

same member as ic-th member of the third degree is not
present at higher position in the route or not;

(5-2-1) if it is present at higher position,
interrupting the processing and executing the processing of
Step (5-1) to the record of the next third degree member by
interrupting the processing;

(6) if it not present at higher position, extracting
the fourth degree member in parent-child relationship of
ic-th member of the third degree;

(7) repeating the procedure by progressively
increasing the value up to the degree of the number as set
in advance, and performing the following processing in the
final degree member:

(7-1) judging whether ix-th (i = 1 to n) member is a
sub-member or not among the number of records "nx" of the
final degree extracted;

(7-1-1) if it is a sub-member, storing the route from
the regular member in array area of the memory, and
advancing to the next record of the final degree;

(7-2) if it is not a sub-member, advancing to the next
record of the final degree. If the record of the final
degree is completed up to "n", performing processing by
progressively increasing by one the number of records of
the degree one step before;

(7-3) if the number of recording of the degree one
step before is completed up to "n", performing processing
by progressively increasing by one the number of records of
the degree one step before;

104

(8) performing this procedure until the number of records of all degrees is completed;

(9) rearranging retrieval results stored in array area of the memory from the member of lower degree in the route;

5   (10) displaying the first of the retrieval results in the tree view area; and

(11) displaying the route selected by the user among the retrieval results in the tree view area if the user designates the change of the retrieval result display in

10 the pulldown list box.

20. An associating information management system for associating various types of information and for managing the information, said system at least comprising:

a relationship vector table for storing relationship

15 of said various types of information, direction of said relationship, and position time series information; and

retrieval processing means for performing retrieval processing for association based on the relationship stored in said relationship vector table, direction of said

20 relationship and position time series information, and for performing output processing of the relationship map.

21. An associating information management system according to claim 20, wherein there is further provided a relationship management table for storing parent-child

25 relationship between said various types of information, and said retrieval processing means outputs a relationship map to display transition of relationship along said position time series of said various types of information as said

relationship map and also outputs a relationship pedigree
displaying connection of said various type of information
in form of chains.

22. An associating information management system
according to claim 21, wherein said various types of
information are under management by a member management
table for storing member data consisting of identification
information and detailed information.

23. An associating information management system
according to claim 22, wherein said detailed information
contains assortment information for assorting members.

24. An associating information management system
according to claim 23, wherein said assortment information
includes type, rank, classification, and job type.

25. An associating information management system
according to claim 22, wherein said detailed information
comprises FAT information, address recorded in FAT, file
type, directory pass, file name, scope of selection, object,
attribute, or information having attribute.

26. An associating information management system
according to claim 22, wherein said identification
information comprises ID, FAT information, address recorded
in FAT, file type, directory pass, file name, scope of
selection, object, attribute, or information having
attribute.

27. An associating information management system
according to claim 21, wherein said relationship management
table comprises information of mutual associating direction

and degree of relationship.

28. A program for associating information management for associating and managing various types of information by using a relationship vector table for storing

5 relationship between said various types of information, direction of said relationship and position time series information, retrieval processing for association is performed according to the relationship, direction of the relationship and the position time series information

10 stored in said relationship vector table, and output processing of the relationship map is carried out.

29. A recording medium for associating information management and readable by computer and for managing various types of information by association, said recording

15 medium records a relationship vector table for storing relationship between said various types of information, said direction of relationship and said position time series information, and a retrieval processing program for performing retrieval processing of association based on the

20 relationship, direction of the relationship and the position time series information stored in said relationship vector table and for carrying out output processing of the relationship map.